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26486	7590	10/29/2007		
BURNS & LEVINSON, LLP 125 SUMMER STREET BOSTON, MA 02110			EXAMINER CONOVER, DAMON M	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/623,847	Applicant(s) PAQUETTE ET AL.	
	Examiner Damon Conover	Art Unit 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed 18 July 2007 has been entered and made of record.

### ***Response to Arguments***

2. Due to the amendments to the abstract and specification, the objections to the disclosure have been withdrawn.
3. Applicant's arguments, see pages 13-14, filed 18 July 2007, with respect to claims 8-13 being directed to statutory subject matter have been fully considered and are persuasive; therefore the rejection of claims 8-13 under 35 U.S.C. §101 has been withdrawn.
4. Applicant's arguments have been considered but are moot in view of new ground(s) of rejection.

In response to applicant's argument that Hirose et al. do not identify a plurality of collinear lines, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak

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values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations, an edge mark is determined to be present (figures 8A-D, column 5, lines 30-46). The examiner believes that the edge mark determination for a plurality of edge marks is analogous to identifying a plurality of collinear line segments from the line segment data.

In response to applicant's argument that the combination of Hirose et al. and Matsumoto et al. would produce an inoperative device, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. *O'Reilly*, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

5. Claims 14-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 14-18 are drawn to functional descriptive material recorded on a computer-usable medium. Normally, the claims would be statutory. However, the specification, at paragraph 41, defines the claimed computer-usable medium as encompassing statutory media such as a floppy disk, flexible disk, hard disk, magnetic tape, CDROM, punched card, paper tape, RAM, and PROM, as well as ***non-statutory*** subject matter such as a carrier wave.

Claims 14-18 as a whole define a carrier wave, and "[a] transitory, propagating signal ... is not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35

U.S.C. § 101; thus, such a signal cannot be patentable subject matter." (*In re Petrus A.C.M. Nuijten*; Fed Cir, 2006-1371, 9/20/2007).

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to include the disclosed tangible computer readable media, while at the same time excluding the intangible media such as carrier waves. Any amendment to the claim should be commensurate with its corresponding disclosure.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (U.S. Patent 4,736,441) and Matsumoto et al. (U.S. Patent 5,774,584) in view of Fujieda (U.S. Patent Publication 2002/0063893).

**With respect to claim 1**, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return

address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations, an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46).

Hirose et al. describe that edge mark detection and masking makes possible the detection of airmail mark, stamp, and address information in cases where those objects overlap the edge mark by eliminating the edge mark (column 8, lines 24-34). Hirose et al. do not describe identifying a plurality of intersecting lines from the histogram data.

Matsumoto et al. disclose an image processing method and apparatus which can identify ruled lines which construct a table from image data of a table area (column 1, lines 11-14). Histograms of pixels from the table area in the horizontal and vertical directions are obtained (column 3, lines 1-18). Using the peak position coordinates of the histograms, the plurality of intersecting lines are identified (column 3, line 62 –

column 4, lines 25). The plurality of intersecting lines are used to identify a table and the individual cells of the table (features of the image) (figure 5 and column 4, lines 26-43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the step of generating horizontal and vertical histograms to detect the intersection of lines, as taught by Matsumoto et al., in the postal material reading apparatus of Hirose et al., in order to identify points where objects overlap edge marks.

Neither Hirose et al., nor Matsumoto et al. describe that the line segment data comprises line segment angle data.

Fujieda discloses methods and apparatus for measuring position and orientation of a target object with a contour containing straight lines and inspecting whether there is a defect in the contour (paragraph 1). Fujieda describes an image processing apparatus that extracts from an image the straight-line portions on the contour of a target object and the crossing points of the extensions of those straight-lines (paragraph 44). Fujieda also describes that the direction (angle) of each edge pixel is extracted and calculated and a histogram of angle data is prepared (paragraph 57). The angle of the edge corresponds to the location of the peak of the histogram (paragraph 62). If there is a plurality of line segments in the image corresponding to the same angle, the same label is assigned to the line segments (paragraph 66). Figures 10a and 11 show the identification of two collinear lines and the conclusion that the collinear line segments may be unified (paragraph 87).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the angle information, as taught by Fujieda, in the postal material



reading apparatus of Hirose et al. and Matsumoto et al., in order to more accurately identify collinear lines (Fujieda, paragraph 87).

**With respect to claim 2**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations (characteristic properties), an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46). Line segments which are not determined to be constant or to

match characteristic reference locations (characteristic properties) are determined to not be an edge mark (collinear line segments).

**With respect to claim 3**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas (preselected locations) are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations (characteristic properties), an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46). Line segments which are not determined to be

constant or to match characteristic reference locations (characteristic properties) are determined to not be an edge mark (collinear line segments). As discussed above, Matsumoto et al. disclose an image processing method and apparatus which can identify ruled lines which construct a table from image data of a table area (column 1, lines 11-14). Histograms of pixels from the table area in the horizontal and vertical directions are obtained (column 3, lines 1-18). Using the peak position coordinates of the histograms, the plurality of intersecting lines are identified (column 3, line 62 – column 4, lines 25). The plurality of intersecting lines are used to identify a table and the individual cells of the table (features of the image) (figure 5 and column 4, lines 26-43).

Neither Hirose et al., nor Matsumoto et al. describe that a histogram displays a number of line segments in a predetermined angular range.

Fujieda discloses methods and apparatus for measuring position and orientation of a target object with a contour containing straight lines and inspecting whether there is a defect in the contour (paragraph 1). Fujieda describes an image processing apparatus that extracts from an image the straight-line portions on the contour of a target object and the crossing points of the extensions of those straight-lines (paragraph 44). Fujieda also describes that the direction (angle) of each edge pixel is extracted and calculated and a histogram of angle data is prepared (paragraph 57). The angle of the edge corresponds to the location of the peak of the histogram (paragraph 62). If there is a plurality of line segments in the image corresponding to the same angle, the same label is assigned to the line segments (paragraph 66). Figures 10a and 11 show the

identification of two collinear lines and the conclusion that the collinear line segments may be unified (paragraph 87).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the angle histogram, as taught by Fujieda, in the postal material reading apparatus of Hirose et al. and Matsumoto et al., in order to more accurately identify collinear lines (Fujieda, paragraph 87).

**With respect to claim 4**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas (preselected locations) are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to

be constant and match characteristic reference locations (characteristic properties), an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46). Line segments which are not determined to be constant or to match characteristic reference locations (characteristic properties) are determined to not be an edge mark (collinear line segments).

Hirose et al. do not describe identifying a plurality of intersecting lines from the histogram data.

As discussed above, Matsumoto et al. disclose an image processing method and apparatus which can identify ruled lines which construct a table from image data of a table area (column 1, lines 11-14). Histograms of pixels from the table area in the horizontal and vertical directions are obtained (column 3, lines 1-18). Using the peak position coordinates of the histograms, the plurality of intersecting lines are identified (column 3, line 62 – column 4, lines 25). The plurality of intersecting lines are used to identify a table and the individual cells of the table (features of the image) (figure 5 and column 4, lines 26-43). In the combination of Hirose et al. and Matsumoto et al., the points where objects overlap edge marks (features of the image) will be identified in the edge mark detection areas (preselected locations).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the step of generating horizontal and vertical histograms to detect the intersection of lines, as taught by Matsumoto et al., in the postal material reading apparatus of Hirose et al., in order to identify points where objects overlap edge marks.

**With respect to claim 5**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15 in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas (preselected locations) are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations (characteristic properties), an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46). Line segments which are not determined to be constant or to match characteristic reference locations (characteristic properties) are determined to not be an edge mark (collinear line segments).

Hirose et al. do not describe identifying a plurality of intersecting lines from the histogram data.

As discussed above, Matsumoto et al. disclose an image processing method and apparatus which can identify ruled lines which construct a table from image data of a table area (column 1, lines 11-14). Histograms of pixels from the table area in the horizontal and vertical directions are obtained (column 3, lines 1-18). Using the peak position coordinates of the histograms, the plurality of intersecting lines are identified (column 3, line 62 – column 4, lines 25). The plurality of intersecting lines are used to identify a table and the individual cells of the table (features of the image) (figure 5 and column 4, lines 26-43). In the combination of Hirose et al. and Matsumoto et al., there will be edge mark detection areas on all four sides of the envelope. The above steps will be repeated for each edge mark detection area; therefore identifying subsequent collinear line segments, subsequent intersecting lines, and subsequent features.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the step of generating horizontal and vertical histograms to detect the intersection of lines, as taught by Matsumoto et al., in the postal material reading apparatus of Hirose et al., in order to identify points where objects overlap edge marks.

**With respect to claim 6**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57). The surfaces of each envelope is scanned by imaging devices 14 and 15

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in order to obtain image data relating to stamp 2, address 4, airmail mark 5, airmail edge mark E, return address 8, and seal 9 (figures 1-4 and column 3, lines 16-27). It is inherent that pixel data is obtained for the pixels in the scanned image. Edge mark detection areas (preselected locations) are defined and a histogram of each edge mark detection area is calculated (column 4, line 58 – column 5, line 2). Peak values for the histograms and their positions (line segment data) are stored. The peak values indicate the existence of line segments, and the positions of the peak values indicate the positions of the line segments (column 5, lines 14-29). Edge mark detectors determine whether each repetition rate and/or position of the peak value of the histogram for each edge marking of each edge mark detector area is within the limits of a characteristic location pattern of a standard edge marking. If the period of repetition is determined to be constant and match characteristic reference locations (characteristic properties), an edge mark is determined to be present. This is analogous to identifying a plurality of edge marks (collinear line segments) from the histogram data (line segment data) (figures 8A-D, column 5, lines 30-46). Line segments which are not determined to be constant or to match characteristic reference locations (characteristic properties) are determined to not be an edge mark (collinear line segments).

Hirose et al. do not describe identifying a plurality of intersecting lines from the histogram data.

As discussed above, Matsumoto et al. disclose an image processing method and apparatus which can identify ruled lines which construct a table from image data of a table area (column 1, lines 11-14). Histograms of pixels from the table area in the



horizontal and vertical directions are obtained (column 3, lines 1-18). Using the peak position coordinates of the histograms, the plurality of intersecting lines are identified (column 3, line 62 – column 4, lines 25). The plurality of intersecting lines are used to identify a table and the individual cells of the table (features of the image) (figure 5 and column 4, lines 26-43). In the combination of Hirose et al. and Matsumoto et al., there will be edge mark detection areas on all four sides of the envelope. The above steps will be repeated for each edge mark detection area; therefore identifying subsequent collinear line segments, subsequent intersecting lines, and subsequent features.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the step of generating horizontal and vertical histograms to detect the intersection of lines, as taught by Matsumoto et al., in the postal material reading apparatus of Hirose et al., in order to identify points where objects overlap edge marks.

In the combination of Hirose et al. and Matsumoto et al., each edge mark detection area is processed separately. There is no specific teaching that the same features detected in overlapping areas are merged.

However, Official Notice (see MPEP 2144.03) is taken that both the concept and the advantages of merging the same features that have been extracted from overlapping regions are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to merge two features extracted from overlapping regions, if it is determined that they are the same feature, in the postal material reading apparatus of Hirose et al.

and Matsumoto et al., in order to reduce the set of features to only include unique features.

**With respect to claim 7**, as discussed above, Hirose et al. disclose a reading apparatus that can accurately determine the reverse/obverse of postal material (mail piece) and determine whether the postal material is right side up or upside down, in spite of partial overlapping of an edge mark with marks that are critical to the determination (column 1, lines 52-57).

**With respect to claims 8-13**, the “system for identifying features on an item” corresponds to the “method for detecting features” of claims 1-7. The arguments are the same as is addressed above.

**With respect to claims 14-18**, the “computer program product” corresponds to the “method for detecting features” of claims 1-6. The arguments are the same as is addressed above.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Damon Conover whose telephone number is (571) 272-5448. The examiner can normally be reached Monday – Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner, can be reached at (571) 272-7401. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/Brian P. Werner/  
Supervisory Patent Examiner (SPE), Art Unit 2624